THE PUBLIC'S HEALTH

Newsletter for Medical Professionals in Los Angeles County

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Olive View Medical Center named Center of Excellence for Chagas' Patients

Chagas' disease is becoming increasingly recognized in the Southern California population. It is endemic to a large portion of Latin America and, given immigration trends over the last 20 years, is becoming increasingly prevalent in the U.S.

Complications of chronic Chagas' infection include a chronic myocarditis eventually leading to end-stage cardiomyopathy in 10-20% of infected individuals. Since the institution of testing all Southern California blood donors in January 2007, the Red Cross has reported over 30 positive serologies. To date there are no guidelines or specialized clinics developed to evaluate and monitor these patients.

Working with the Southern California Red Cross and the CDC, Olive View-UCLA Medical Center has been designated a Center of Excellence for the Diagnosis and Treatment of Chagas' disease. Services will be provided for all patients. Staffing will be provided by a collaborative team including cardiologists, infectious disease specialists, pediatricians and a nurse practitioner.

Since the institution of testing all Southern California blood donors in January 2007, the Red Cross has reported over 30 positive serologies for Trypanosoma cruzi. To date there are no guidelines or specialized clinics developed to evaluate and monitor these patients.

Currently, several clinical screening trials are underway at Olive View:

- 1) Latin American immigrant patients with conduction abnormalities on electrocardiogram (RBBB, LBBB, LAFB,)
- 2) Latin American immigrant patients with cardiomyopathy of undetermined etiology
- 3) 1st and 2nd degree relatives of patients diagnosed with Chagas' disease.

To refer patients with positive Chagas' serologies or to participate in the screening trials please contact:

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Chagas' Disease Locally

Chagas' disease is an infection with Trypanosoma cruzi, transmitted by Triatominae bug bites. Nearly 100 years since its discovery by the Brazilian physician Carlos Chagas, it remains one of the most common causes of myocarditis worldwide.

Recent cases in L.A. County

Infection can be transmitted by blood transfusion, organ transplantation, or transplacentally. The last two reported cases of Chagas' disease transmission through solid organ transplantation in the U.S. occurred in Los Angeles County. In California, during the last 18 years, 25% of organ donors were Hispanic.

There is concern that additional transfusion-associated Chagas' disease will occur as immigration increases to the U.S. from Central and South America. Many infected people have no symptoms or signs of the disease. Recommendations for screening donors include careful history and antibody testing.

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Rabies: A Century of Change, Part 1

World Rabies Day is a global initiative by the nonprofit Alliance for Rabies Control to raise awareness about the effects of human and animal rabies and how the disease can be prevented. Los Angeles marked World Rabies Day --September 9, 2007-- by warning people to be on guard against rabies. Public officials reminded pet owners about vaccinations offered at animal shelters

Rabies, known since ancient times, is one of the most feared infectious diseases. Perhaps because, once clinical signs develop, it has a mortality rate of over 99%. Early symptoms of rabies in humans are nonspecific, consisting of fever, headache and general malaise.

During the past century, the county has gone from rejecting its existence to reluctant acceptance. At the beginning of the 1900s, the general public frequently denied the existence of rabies. Numerous health professionals reported they never saw rabies. To dispel the myth that rabies did not exist in Southern California, an article was published in 1910 and presented to the American Medical Association reporting that there were 111 human deaths from rabies in 1908.

In Los Angeles, rabies was first diagnosed in 1898 in a dog. The male dog was reported to the health office by the owner. The dog was nervous, uncontrollable and fought other dogs; it became necessary to shoot him. Four or five other dogs with rabies were reported in the course of a few weeks, some with the "dumb" form and others with the "furious" form. The diagnosis of most of these cases was made at a Chicago veterinary school. The source of this infection was not determined. One suggestion was that dogs obtained it from wild animals. Since rabies had existed for years among the skunks and coyotes in Arizona, it was reasonable that it would spread to Southern California.

Following the rabies outbreak in dogs, the city Board of Health recommended a muzzling ordinance which was passed by the city council on February 23, 1898. The ordinance required all dogs running at large in public places, whether licensed or not, to be muzzled which would prevent the dogs from biting other animals or human beings. The police and dogcatcher were

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Public vaccination clinic for dogs

Public rabies vaccination clinics for dogs were developed by the Southern California Veterinary Medical Association following the law requiring that dogs must be vaccinated for rabies. The program was successful.



Chagas' Disease Locally...from page 1

In December 2006, the FDA approved the first test to screen blood donors for Chagas' disease (Ortho-Clinical Diagnostics). In addition to screening people who donate whole blood, the ELISA test is intended for use in screening plasma and serum samples from organ, cell and tissue donors. According to the company, the test has a sensitivity and specificity of over 99.9 percent in clinical trails. In 2007, Ortho-Clinical Diagnostics will seek FDA approval to expand use of its test for Chagas' disease for general diagnostic purposes.

How infection occurs

In nature, the flagellated protozoan is spread by the bites of infected kissing or assassin bugs. The bugs are known as "kissing bugs" because they tend to feed on people's faces while they are sleeping. While biting, infected bugs deposit feces containing metacyclic trypomastigotes on the skin.

These infective forms enter through the bite wound or penetrate mucous membranes. The parasites then invade macrophages at the site of entry, transform into amastigotes that multiply by binary fission, and are released as trypomastigotes into the blood and infect other cells. Cells of the reticuloendothelial system, myocardium, muscles, and nervous system are most commonly involved. Once infection occurs, low-level parasitemia usually persists for life. Early infection is usually mild and unrecognized, but persists lifelong and may lead to organ damage, particularly of the heart and esophagus. Reservoirs of the vector-borne disease include wildlife and other animals.

Medical and veterinary importance

Chagas' disease is of both medical and veterinary importance. The chronic phase produces myocarditis in people, wildlife and dogs.

Autochthonous cases of Chagas' disease are common in suburban wildlife in the United States. In a suburban area outside Washington, D.C., serum samples from raccoons were examined for T. cruzi antibodies at a 1:40 dilution with an indirect fluorescent antibody test. Positive serology was found in 33% of the 464 samples.

A surveillance program in Los Angeles County in 1984 detected Chagas' disease in a young adult male, native, free-living skunk in Griffith Park (the nation's largest municipal park). Postmortem examination revealed meningoencephalitis and multifocal myocarditis with amastigote pueudocyotes in the cardiac tissue. Serum from the skunk tested positive by CDC for antibodies to T. cruzi. A serological survey of the park's skunks revealed antibody titers in 23% of the animals. It is speculated that wildlife consume

the infected triatomine bugs as a source of food.

Although uncommon, autochthonous cases of Chagas' diseases in domestic dogs do occur in the U.S. The disease in dogs is primarily a cardiomyopathy that develops from parasite-induced damage to myocardial cells or immune-mediated reactions. Exercise intolerance and weakness are nonspecific presenting complaints that relate to myocarditis or heart failure.

Chagas' disease is endemic in Mexico, South America, and Central America, where an estimated 18 million people are infected. It is also referred to as American trypanosomiasis. The vector-borne disease in people in most areas of the U.S. is rare, but some Latin American immigrants living in the U.S. are chronically infected. These people are potential sources of transmission by blood transfusion or organ donation. Chagas' disease is of special concern in Southern California, where there is a large immigrant population from countries where T. cruzi is endemic.

By: Patrick Ryan, DVM, MPH

Chief Veterinarian, Veterinary Public Health and Rabies Control

References

- Prevalence of antibodies to Trypanosoma cruzi in raccoons (Procyon lotor) from an urban area of northern Virginia. Journal of Parasitology. 2005 Apr;91(2):470-2.
- American Trypanosomiasis (Chagas' Disease) in a Striped Skunk. Journal of Wildlife Diseases. 1985 21(2):175-176
- Chagas disease after organ transplantation--Los Angeles, California, 2006. MMWR. 2006 Jul 28;55(29):798-800. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5529a3.htm
- Prevalence of Antibodies to Trypanosoma cruzi among Solid Organ Donors in Southern California: A Population at Risk. Transplantation. 15 February 2006Volume 81(3):477-479

Birth Dose of Hepatitis B Vaccine

Hepatitis B vaccine administered to newborns before hospital discharge may minimize the risk of infection due to errors in maternal HBsAg testing or reporting, or from exposure to persons with chronic hepatitis B infection in the household.

In LA county, of the reported 751 infants born to HBsAg-positive mothers in 2005, 18 (2.4%) did not receive immunoprophylaxis (hepatitis B vaccine and HBIG) within 24 hours of birth.

It is estimated that over 40% of infants born to HBsAg-positive mothers will become infected without prophylaxis. An estimated 90% of infants who become infected by perinatal transmission develop chronic HBV infection and as many as 25% will die from chronic liver disease as adults. Although not a substitute for immunoprophylaxis, routinely administering hepatitis B vaccine to infants at birth regardless of the mothers HBsAg status can serve as a safety net. Studies have shown that administering hepatitis B vaccine without HBIG beginning ≤12 hours after birth in a 3-or 4-dose schedule can prevent 70%–95% of perinatal hepatitis B infections among infants born to HBsAg positive mothers.

Recommendations from national organizations

Noted medical groups – the Advisory Committee on Immunization Practices (ACIP), American Academy of Pediatrics (AAP), and American Academy of Family Physicians (AAFP) – recommend health care providers routinely administer the first dose of hepatitis B vaccine to infants soon after birth and before hospital discharge. Only in rare circumstances, and on a case-by-case basis, may the first dose be delayed until after hospital discharge for an infant who weighs ≥2,000g and whose mother is HBsAg-negative. Preteen infants weighing < 2000g and born to HBsAg-negative mothers should have their first vaccine dose delayed until one month after birth or hospital discharge. Universal hepatitis B vaccine birth dose policy in all delivery hospitals will optimize the protection of all infants from human error and chronic HBV infection.

County ranks low on birth doses

In the county, too few hospitals have implemented the routine administration of the birth dose of hepatitis B regardless of the mother's HBsAg status. In 2005, the National Immunization Survey found that in Los Angeles County, only 26% of infants received the birth dose of hepatitis B vaccine, compared to the national average of 47.9% and the state of California's average of 29.4%.

The Los Angeles County Immunization Program's Perinatal Hepatitis B Prevention Program (IPHBPP) conducted a survey in 2006 of the birthing hospitals in the county (excluding the city of Long Beach) to assess current practice on administering the recommended universal birth dose of hepatitis B vaccine. Of the 58 delivery hospitals, 50 hospitals responded to the survey (86%). Of the responders, 46% had a policy to offer hepatitis B vaccine to newborns before discharge regardless of the HBsAg status of the mother, 16% of the hospitals reported that vaccine was available as long as it was ordered by the health care provider, and 38% responded that they did not have a policy.

County recommendations

All county birthing hospitals are encouraged to offer the birth dose of hepatitis B vaccine. The (IPHBPP) will assist hospitals in developing policies and procedures to implement the routine administration of hepatitis B vaccine to newborns before hospital discharge. The program also offers patient pamphlets on hepatitis B, Vaccine Information Statements, the California Immunization Record (yellow card), and in-service training for hospitals.

Contact the program at (213) 351-7400 for more information.

California law requires group health insurers to cover vaccination for those age groups recommended by the ACIP; therefore insurers should cover administration of hepatitis B at birth. For children that are uninsured or covered by Medi-Cal, hospitals may desire to apply to become Vaccines for Children Program (VFC) providers and receive federally purchased hepatitis B vaccine without cost for use in eligible infants.

For more information on joining the VFC Program visit the state immunization office's website at: http://www.dhs.ca.gov/ps/dcdc/izgroup/providers/vfc.htm or telephone (877) 243-8832 and press 2.

For current hepatitis B recommendations, contact the (IPHBPP) at (213) 351-7400 or visit http://lapublichealth.org/ip/perinatalhepB/index.htm.

By: Bridget Beeman, RN, MPH

Immunization Program

Pet Food Recall Impacts the Nation

Earlier this year, the Food and Drug Administration (FDA) learned that certain pet foods were sickening and killing cats and dogs. The FDA found contaminants in vegetable proteins imported into the U.S. from China and used as ingredients in pet food. The wave of pet deaths stimulated one of the biggest recalls of pet food in American history. The recall expanded to include tainted pet food products in Canada and Europe. South Africa also recalled pet food which contained melamine.

The FDA announced in May that the suspected "rice protein concentrate and wheat gluten" from China consisted of wheat flour contaminated with melamine. Chinese authorities said a company had intentionally doctored feed ingredients to generate bigger profits. Wheat flour is much easier to make than gluten. By spiking the wheat flour with melamine, the flour would appear to contain more protein. Melamine is not a protein, but a white crystalline compound used in making plastics.

The melamine used to contaminate the food was not pure, but contained many other ingredients, one being cyanuric acid. It may have been "melamine scrap" left over from processing coal into melamine. Originally, scientists could not account for the acute renal failure seen in many pets. Pure melamine is not associated with acute kidney failure. Neither melamine nor cyanuric acid was particularly toxic by itself. Studies are under way to determine what exactly occurred.

Pigs, chickens and farmed fish were also given the contaminated product. Because the pet food was a small proportion of the food the hogs and chickens ate, the amounts of melamine and cyanuric acid were not expected to be large enough to harm the animals or consumers.

Los Angeles County

A total of 195 suspected pet food poisonings were reported to the Department of Public Health. Of those cases, 64 were confirmed. A case was defined as a cat or dog that had consumed the recalled pet food and developed acute renal failure or renal damage, as diagnosed by the pet's veterinarian. Of the 64 cases, 20 died, with a case fatality proportion of 31%. Of the confirmed cat cases 48% died, more than twice the percentage of dogs (17%). The majority of case onsets occurred in the first three weeks of March 2007.

Recall Impacts the Food Safety Network

The outbreak had a dramatic impact on the U.S. food safety network. Pets were not the first animals to experience problems from foods, but the sentinel outbreak alerted the community that something was wrong with our food safety network. Currently, no cases of human illness or disease have been associated with the pet food recall.

The pet food recall has opened the public's eyes on how China views safety issues. Three decades ago, China-U.S. trade volume was almost nonexistent. By 2006, China had become our second largest trade partner.

Melamine has no nutritional value; it is added to food to fool the buyer into believing they are getting more protein. Years ago, urea was added for the same reason. Today, it is illegal to add urea to food products in the U.S.

The material was declared a "nonfood product", meaning that it was not subject to mandatory inspection by the Chinese government. Nonfood products would also not be evaluated by the FDA.

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Rabies: A Century of Change...from page 2

empowered to enforce the ordinance. A few weeks afterward, no rabid dogs were seen in the city. In less than three months and no more evidence of the disease, the city council repealed the ordinance upon the recommendation of the Board of Health.

1899 - County's first documented human rabies

In the spring of 1899, rabies was diagnosed in a Pasadena man who was bitten on his nose by his cocker spaniel. The dog had also bitten a littermate and the patient's four-year-old son. Following the man's death, an autopsy was conducted. The brain, except for meningeal injection, showed no gross lesions. Subdural injections of a medulla emulsion from the patient were given to two rabbits. These rabbits died during the second week with typical symptoms of dumb rabies. The victim's four-year-old son was given the Pasteur treatment. This is a method of aborting rabies by stimulating production of antibodies through successive inoculations with attenuated virus of gradually increasing strength.

1906 - Dog attacks various animals

In the spring of 1906, officials went to Soldiers' Home, 12 miles southwest of Los Angeles where the pet dog of one of the officers was acting strangely. One person, five horses, several dogs and hogs had been bitten by the dog. The director of the Pasteur Institute in Chicago advised that the head of the biting dog be put in glycerin and taken to Chicago by the bite victim. Negri bodies were detected in the dog's brain; the man received the Pasteur treatment. Negri bodies (reported in 1903) are pathognomonic microscopic findings of rabies in nerve cells. Rabbits inoculated from the brain of the dog died of rabies. The dogs bitten at Soldiers Home were immediately killed and the horses quarantined. Later, two of the horses and a hog developed rabies.

In June, 1909, the police shot several dogs suspected of rabies. In September, rabies was suspected in a horse and reported to the health office. The horse was pronounced clinically rabid by the attending veterinarian. It died, and the horse's brain was examined in the city laboratory. Negri bodies were detected in the brain. A black water spaniel examined by the laboratory also showed Negri bodies in the brain.

Another muzzling ordinance proposed

A muzzling ordinance was passed on September 15, 1909, but repealed the following week because of strong opposition by some members of the board of health, a few dog lovers and the humane animal officer. The disease rapidly spread throughout the city.

In November, eight rabid dogs were seen in Pasadena. The Board of Health requested the city council pass an ordinance requiring the muzzling of all dogs running the streets. This request was denied by the council. The epidemic kept up at the rate of one to three cases a day for the next month. It wasn't until the Board of Health attended the council meeting, and with the mayor's assistance, did they succeed in securing the desired ordinance.

During the next six weeks, about 70 rabid dogs and one rabid cat were observed by Pasadena veterinarians. After two months, no further cases were reported; at the end of three months the ordinance was repealed at the request of the Board of Health.

1910 - Neurological disease death following mountain lion attack

The 1910 publication mentions a school teacher who was pounced upon by a California lion. The animal held her with his front claws on her shoulders; every time she moved or screamed his claws tightened. After the lion was shot, the woman recovered from her wounds. About four weeks later she developed neurological symptoms that could not be explained and died. The attending physician thought this was a case of rabies from a wild animal attack, but it was not proven. Rabies affects a variety of domestic and wild animals.

1923 - Seven rabid people detected

In the first half of the 1900s, rabies occurred in animals every year, principally in dogs. In 1956, the incidence of animal rabies fluctuated from a high of 847 in 1937 to a low of two cases in 1951. The highest incidence in humans was reached in 1923 when seven cases were reported.

In 1955, bats were known to harbor rabies infection in other areas of the U.S. At that time, no human rabies from bat contact had been recorded, although humans have been attacked by bats.

Dumb and Furious Rabies in Dogs Confuse the Public

One thing that bewildered the public was different behaviors displayed by rabid dogs. The public expected rabid dogs to be "mad," attacking everything in sight. This is the case in the "furious" form, but not the "dumb," or paralytic, form of the disease. When an epidemic of rabies occurs in dogs, the prevalent type is the dumb type. A rule of thumb is that for every case of the furious type, there are ten of the dumb types. In the dumb type, the common clinical signs are the paralysis of the lower jaw and progressive paralysis of the muscles of deglutition. Death follows, usually within days.

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Rabies: A Century of Change...from page 6

State Law

Title 17, California Code of Regulations, Section 2606. Rabies, Animal. (a) **Reporting**. Any person having knowledge of the whereabouts of an animal known to have or suspected of having rabies shall report the facts immediately to the local health officer. The health officer shall likewise be notified of any person or animal bitten by a rabid or suspected rabid animal.

In 1955, approximately 30,000 dog bites were reported across the county. About one bite of every 300 was by a rabid dog. Seven individuals of each 300 bitten were started on Pasteur treatments because of the suspicion of rabies.

No local vampire bats

In countries where the vampire bat is found, human rabies of bat origin occurs. Los Angeles harbors no vampire bats but has numerous other bats. The 1956 article indicated that bat bites in people were extremely rare, so bat bites did not constitute a direct rabies threat. However, because bats have been known to recover from rabies infection, the 1956 publication recommended the bat should probably be regarded as a possible reservoir from which wild animal and canine outbreaks may stem.

Time proved the 1956 recommendation extremely helpful. Today, local bats are considered rabid until proven otherwise. Of the bats currently tested in the county, about 10% are positive for rabies. In the 21st century, most human cases of rabies in the U.S. are related to the bat strain of rabies. Any contact with a bat is considered as possible exposure to rabies until the bat has tested negative.

1956 - Rabies outbreak stimulates requiring dog vaccinations

In 1956, 24 cows and one hog were diagnosed with rabies at the charitable home and trade school for boys, operated by the Methodist church. One milk cow chased chickens; others pawed the ground, pushing their heads against the fence and corrals. An epidemic of rabies in dogs was occurring at the time and a stray dog had roamed though the boys home earlier.

That year, Los Angeles County required that all dogs be vaccinated for rabies as a prerequisite to licensing. The following year, the State passed a similar law. In 1958, the Southern California Veterinary Medical Association started public rabies vaccination clinics for dogs at a cost of \$1.50 each. The vaccination ordinances are still in effect.

Laws require reporting animal bites

Los Angeles County ordinances and state law require reporting animal bites to the health officer (see Title 17 section 2606). The health officer is required to conduct an investigation to determine if rabies exists. Usually with cats and dogs this requires a 10 day quarantine. If the animal is normal at the end of 10 days, it indicates the animal did not have the rabies virus in its saliva at the time of the bite.

Currently, rabies in the U.S. is primarily maintained by wildlife populations. During the past 15 years in Los Angeles County, all endemic rabies have been in bats. The last two confirmed rabid domestic animals were imported through Los Angeles International Airport. In 1987, a cat entered from Mexico and a puppy entered from Thailand in 2004. The last two human cases in Los Angeles County were imported from Latin America. One was a girl from Mexico in 1975, the other a man from El Salvador in 2005.

Cost of Rabies Prevention

The estimated public health costs associated with rabies detection, prevention, and control in the U.S. exceeds \$300 million annually. These costs include vaccinating companion animals, animal control programs, maintenance of rabies laboratories and medical costs, such as those incurred for rabies post-exposure prophylaxis.

Part 2 will be published on an up comming Issue

By: C. Patrick Ryan, DVM, MPH.

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References

- Black SP, Powers LM: History of rabies in southern California. California State Journal of Medicine Vol. VIII, No. II November 1910 pp. 369-372
- Pait CF, Forney JE: Canine rabies in Los Angeles. University of Southern California Medical Bulletin, Volume 8. Number 2. January 1956
- CDC's rabies website http://www.cdc.gov/ncidod/dvrd/rabies/

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TPH Survey

Please take a few moments to complete the survey. Your opinion is very important to us.

If you prefer, you may print out the survey, complete it and mail it back to: Sheree R. Poitier, MD, Editor in Chief, The Public's Health. 313 N. Figueroa St. Ste. 227. LA, CA, 90012

The survey can be accessed at https://lacws.co.la.ca.us/dhs/tphsurvey.htm.

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THE PUBLIC'S HEALTH

sletter for Medical Professionals in Los Angeles County



Selected Reportable Diseases (Cases) ¹ — April 2007									
	THIS PERIOD MAY 2007	SAME PERIOD LAST YEAR MAY 2006	YEAR TO DATE –MAY		YEAR END TOTALS				
Disease			2007	2006	2006	2005	2004		
AIDS ¹	131	82	617	558	1382	1505	2210		
Amebiasis	11	6	48	30	94	114	114		
Campylobacteriosis	81	78	334	278	774	725	884		
Chlamydial Infections	3,557	3,524	17,466	16,713	39,943	38,862	38,464		
Encephalitis	1	5	12	23	45	57	133		
Gonorrhea	831	905	4,101	4,481	10,457	10,494	9,696		
Hepatitis Type A	4	37	40	260	365	480	321		
Hepatitis Type B, acute	4	4	18	26	62	57	72		
Hepatitis Type C, acute	1	1	1	2	4	3	5		
Measles	0	0	0	1	1	0	1		
Meningitis, viral/aseptic	17	32	98	133	369	515	807		
Meningococcal Infect.	1	3	14	26	46	37	28		
Mumps	2	0	4	3	10	10	5		
NGU	51	72	217	358	758	1,101	1,470		
Pertussis	5	19	29	69	149	438	156		
Rubella	0	0	0	0	0	1	0		
Salmonellosis	80	96	325	348	1,216	1,085	1,205		
Shigellosis	20	32	83	133	521	710	625		
Syphilis (prim. and sec.)	66	67	371	316	792	644	470		
Syphilis early latent	60	58	315	286	755	570	395		
Tuberculosis	68	72	171	208	885	906	930		
Typhoid fever, Acute	1	2	6	7	17	12	13		

^{1.} Case totals are provisional and may vary following periodic updates of the database.